

CLAIMS

We Claim:

1. A data processing and communication system for at least one of:
adminstrating, monitoring, verifying and authenticating remote activities of a user
5 over a communication network, comprising:

at least one user workstation, utilized by the user, connected to the
communication network,

a supervisor workstation, utilized by a supervisor, connected to
said at least one user workstation through the communication network;

10 data acquisition means, located at each of said at least one user
workstation, for capturing user data representative of activities of the user at
each said at least one user workstation;

data transmission means for transmitting said user data to said
supervisor workstation such that said supervisor can monitor said user data in
15 real-time;

data recording means for recording said user data in a session
record; and

data storage means for storing said session record for future
authentication of performance of said remote user activities and the user's
20 identity.

2. The data processing and communication system of claim 1, further comprising a server, connected to the communication network, said server being operable to:

5 control communication between said supervisor workstation and said at least one user workstation; and control said data recording means and said data storage means.

3. The data processing and communication system of claim 2, further comprising at least one additional supervisor workstation connected to the communication network, wherein said server is further operable to automatically switch said connection between said at least one user workstation and said supervisor workstation to one of said at least one additional supervisor workstation in response to one of:

15 termination of said connection between said at least one user workstation and said one of said supervisor workstation; and an instruction received from said supervisor requesting switch of said connection.

20 4. The data processing and communication system of claim 1, wherein the communication network is selected at least from the following group: local area network (LAN), wide area network (WAN), Internet, Intranet, dial-up network, and wireless network.

5 5. The data processing and communication system of claim 1, wherein said user data comprises media data, comprising at least one of audio and visual data, representative of a user's physical activities at said at least one user workstation.

10 6. The data processing and communication system of claim 5, further comprising task program means, at said at least one user workstation, for enabling the user to perform a predetermined task at said at least one user workstation, wherein said user data further comprises task data representative of results of the user's performance of said predetermined task.

15 7. The data processing and communication system of claim 6, wherein said predetermined task is at least one of: a question and answer examination, an adaptive test examination, a multimedia question and answer set, a skill and proficiency test, resolution of a technical support issue, and an interview.

20 8. The data processing and communication system of claim 6, further comprising security means for at least one of: concealing said task data from said supervisor when said task data is confidential, and removing said task program means from said at least one user workstation when said predetermined task is completed by the user.

9. The data processing and communication system of claim 1, wherein said data acquisition means comprises a camera operable to acquire a visual image stream of the user and of an area surrounding said at least one user workstation.

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10. The data processing and communication system of claim 9, wherein said camera is operable to move within a predetermined field of view, and wherein said supervisor workstation further comprises first control means for controlling said motion of said camera in response to said supervisor's instructions.

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11. The data processing and communication system of claim 9, wherein said data acquisition means further comprises a microphone operable to acquire an audio data stream from the user and from said area surrounding said at least one user workstation.

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12. The data processing and communication system of claim 11, further comprising data control means, at said supervisor workstation, for controlling, by said supervisor, parameters of at least one of said visual image stream and audio data stream.

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13. The data processing and communication system of claim 6, further comprising lockout means for preventing the user from utilizing unauthorized

program applications and hardware components at said at least one user workstation during performance of said predetermined task by the user.

14. The data processing and communication system of claim 6, further
5 comprising system monitoring means for detecting an attempt by the user to utilize unauthorized program applications and hardware components at said at least one user workstation during performance of said predetermined task by the user.

10 15. The data processing and communication system of claim 14, further comprising termination means at said supervisor workstation for terminating the user's performance of said predetermined task prior to completion thereof when unauthorized activity by the user is detected by said supervisor via at least one of said data acquisition means and said system
15 monitoring means, and for recording said termination action in said session record.

16. The data processing and communication system of claim 1, further comprising communication means for communication between the user and said
20 supervisor during user's performance of said predetermined task.

17. The data processing and communication system of claim 1, wherein said communication means comprises a chat application executed by at least one of said supervisor workstation and said at least one user workstation.

18. The data processing and communication system of claim 1,
wherein said data transmission means comprises synchronized multi-media data
streaming based at said at least one user workstation to facilitate data
5 transmission over a low-bandwidth connection.

19. The data processing and communication system of claim 1,
wherein each said at least one user workstation comprises authentication means
for verifying identity of a user utilizing said at least one user workstation by
10 acquiring authentication data.

20. The data processing and communication system of claim 1,
wherein said authentication means comprises at least one of: a biometric
scanner, a password supplied by the user, and an image of the user's
15 photographic personal identification acquired by said data acquisition means.

21. The data processing and communication system of claim 19,
further comprising means for storing said authentication data in said session
record.

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22. The data processing and communication system of claim 1, further
comprising:

second data acquisition means, located at said supervisor workstation, for capturing supervisor data representative of at least a portion of activities of a supervisor at said supervisor workstation;

second data transmission means for transmitting said supervisor
5 data to said at least one user workstation for viewing by a user.

23. The data processing and communication system of claim 22, further comprising instruction means for enabling shared application access from said supervisor workstation with said at least one user workstation.

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24. The data processing and communication system of claim 6, wherein said supervisor workstation further comprises display means for displaying said user data to said supervisor.

15 25. The data processing and communication system of claim 24, wherein said display means comprise a display monitor, and wherein said supervisor workstation comprises a first graphical front-end interface operable for display on said display monitor to said supervisor, said first graphical front-end interface comprising:

20 at least one user monitor window operable to:

display said visual user data received from said at least one user workstation,

provide information representative of parameters of said user data to said supervisor, and

enable said supervisor to control said parameters

a task window operable to display non-visual user data received from said at least one user workstation; and

at least one of: a chat window for enabling chat communication
5 between said supervisor workstation and said at least one user workstation, a hotkey message window for selectively sending one of a plurality of predefined test messages to said at least one user workstation, and a hotkey control window for providing customizable functional controls over said supervisor workstation to said supervisor.

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26. The data processing and communication system of claim 24, wherein said display means comprise a plurality of display monitors, and wherein said supervisor workstation comprises a second graphical front-end interface operable for display on said plural display monitors to said supervisor, said
15 second graphical front-end interface comprising:

a program front end interface, positioned at a first plural display monitor, comprising a task window operable to display non-visual user data received from said at least one user workstation; and at least one of: a chat window for enabling chat communication between said supervisor
20 workstation and said at least one user workstation, a hotkey message window for selectively sending one of a plurality of predefined test messages to said at least one user workstation, and a hotkey control window for providing customizable functional controls over said supervisor workstation to said supervisor.

a plurality of user monitor windows positioned at other plural display monitors, each of said plural user monitor windows being operable to:

display said visual user data received from a plurality of corresponding user workstations,

provide information representative of parameters of said user data from each said plural user workstation to said supervisor, and

enable said supervisor to control said parameters.

27. A data processing and communication system for at least one of: administrating, monitoring, verifying and authenticating remote activities of a plurality of users over a communication network, comprising:

a plurality of user workstations, each utilized by the corresponding plural user, connected to the communication network,

a plurality of supervisor workstations, each utilized by a corresponding supervisor, connected to the communication network;

at least one server connected to the communication network operable to operable to: in response to a request by a particular plural user, determine an available plural supervisor workstation, connect said corresponding plural user workstation to said available plural supervisor workstation, and monitor communication therebetween;

data acquisition means, located at each said plural user workstation, for capturing user data representative of activities of the corresponding plural user;

data transmission means for transmitting said user data from each
5 said plural user workstation to said connected plural supervisor workstation such that said plural supervisor can monitor said plural user data in real-time;

data recording means, at said at least one server, for recording said plural user data in a session record; and

data storage means, at said at least one server, for storing said
10 session record for future authentication of performance of the plural user activities and the plural user identity.

28. A data processing and communication method for at least one of administering, monitoring, and authenticating remote user activities over a
15 communication network, comprising the steps of:

(a) providing at least one user workstation connected to the communication network,

(b) providing a supervisor workstation connected to the communication network;

20 (c) capturing user data representative of activities of the remote user at each said at least one user workstation;

(d) transmitting said user data to said supervisor workstation such that a supervisor can monitor said user data;

(e) recording said user data in a session record; and

(f) storing said session record for future authentication of performance of said remote user activities and the user identity.

29. The data processing and communication method of claim 28,
5 further comprising the steps of:

(g) providing at least one server connected to the communication network

(h) providing at least one additional supervisor workstation connected to the communication network; and

10 (i) automatically switching, by said at least one server, said connection between said at least one user workstation and said supervisor workstation to one of said at least one additional supervisor workstation in response to one of:

termination of said connection between said at least one user
15 workstation and said one of said supervisor workstation; and

an instruction received from said supervisor requesting switch of said connection.

30. The data processing and communication method of claim 28,
20 wherein the communication network is selected at least from the following group:
local area network (LAN), wide area network (WAN), Internet, Intranet, dial-up network, and wireless network.

31. The data processing and communication method of claim 28, wherein said user data comprises media data, comprising at least one of audio and visual data, representative of a user's physical activities at said at least one user workstation.

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32. The data processing and communication method of claim 31, further comprising the step of:

(j) providing a task application to enable the user to perform a predetermined task at said at least one user workstation, wherein said user data
10 further comprises task data representative of results of the user's performance of said predetermined task.

33. The data processing and communication method of claim 32, wherein said predetermined task is at least one of: a question and answer
15 examination, an adaptive test examination, a multimedia question and answer set, a skill and proficiency test, resolution of a technical support issue, and an interview.

34. The data processing and communication method of claim 32,
20 further comprising the steps of:

(k) concealing said task data from said supervisor when said task data is confidential; and

(l) removing said task application from said at least one user workstation when said predetermined task is completed by the user.

35. The data processing and communication method of claim 32, further comprising the step of:

(m) preventing the user from utilizing unauthorized program applications and hardware components at said at least one user workstation during performance of said predetermined task by the user.

36. The data processing and communication method of claim 32, further comprising the step of:

(n) detecting an attempt by the user to utilize unauthorized program applications and hardware components at said at least one user workstation during performance of said predetermined task by the user.

37. The data processing and communication method of claim 36, further comprising the steps of:

(o) terminating, by said supervisor, the user's performance of said predetermined task prior to completion thereof when unauthorized activity by the user is detected by said supervisor, and

(p) recording said termination action in said session record.

38. The data processing and communication method of claim 28, further comprising the step of:

(q) providing selective communication between the user and said supervisor during user's performance of said predetermined task.

39. The data processing and communication method of claim 28,
further comprising the step of:

(r) verifying identity of a user by acquiring authentication data; and

5 (s) storing said authentication data in said session record.

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